WHAT IS CLAIMED IS:

1. A paper product comprising at least one paper web containing cellulosic fibers and a reactive composition applied to said paper web, said reactive composition having the following structure:

$$\left\{[R_1]_a-[Q_1]_b-[R_2]_c\right\}_n$$

wherein,

a, b, c > 0;

$n \geq 1$;

R_1 and R_2 are monomers, homopolymers, or block or graft interpolymers that are capable of degrading interfiber hydrogen bonds contained within said paper web; and

Q_1 is a monomer, homopolymer, or block or graft interpolymer that contains:

i) a charged group that is capable of forming an ionic bond with a charged group present on a first cellulosic fiber; and

ii) a pendant functional group that is capable of forming a covalent bond with a free reactive group present on a second cellulosic fiber.

2. A paper product as defined in claim 1, wherein said charged group of said reactive composition contains a positively charged atom.

3. A paper product as defined in claim 2, wherein said positively charged atom is nitrogen.

4. A paper product as defined in claim 1, wherein at least one of the R_1 and R_2 groups include a moiety selected from the group consisting of a polysiloxane, an aliphatic hydrocarbon, an amphiphilic hydrocarbon, and combinations thereof.

5. A paper product as defined in claim 1, wherein at least one of the R_1 and R_2 groups contain a C_8 or higher aliphatic hydrocarbon moiety.

6. A paper product as defined in claim 1, wherein R_1 is of the form

R_1-Z_1, wherein Z_1 is a bridging radical.

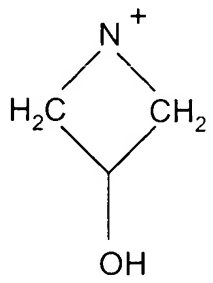
7. A paper product as defined in claim 6, wherein Z_1 is selected from the group consisting of -CH_2-, -COO-, -CONR-, -O-, -S-, -OSO_2O-, -CONHCO-, -CONHCHOHCHOO-, and combinations thereof.

8. A paper product as defined in claim 1, wherein R_2 is of the form R_2-Z_2, wherein Z_2 is a bridging radical.

9. A paper product as defined in claim 8, wherein Z_2 is selected from the group consisting of -CH_2-, -COO-, -CONR-, -O-, -S-, -OSO_2O-, -CONHCO-, -CONHCHOHCHOO-, and combinations thereof.

10. A paper product as defined in claim 1, wherein the pendant functional group of the Q_1 moiety is provided by a group selected from epoxides, anhydrides, azetidiniums, or aldehydes.

11. A paper product as defined in claim 1, wherein the Q_1 moiety is an azetidinium ring having the following structure:



12. A paper product as defined in claim 1, wherein the free reactive group contained one of said cellulosic fibers is selected from the group consisting of carboxyl groups, aldehyde groups, primary or secondary amines, and combinations thereof.

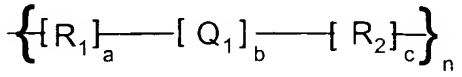
13. A paper product as defined in claim 1, wherein said paper web contains multiple layers.

14. A paper product as defined in claim 13, wherein said first cellulosic fiber is present within one of said layers and said second cellulosic fiber is present within another of said layers.

15. A paper product as defined in claim 1, further comprising at least one other paper web to form a multi-ply paper product.

16. A paper product as defined in claim 15, wherein said first cellulosic fiber is present within one of paper webs and said second cellulosic fiber is present within another of said paper webs.

17. A paper product comprising at least one paper web containing cellulosic fibers and a reactive composition applied to said paper web, said reactive composition having the following structure:



wherein,

a, c > 0;

b = 1;

n ≥ 1;

R_1 and R_2 include a moiety selected from the group consisting of a polysiloxane, an aliphatic hydrocarbon, an amphiphilic hydrocarbon, and combinations thereof, and wherein R_1 is of the form R_1-Z_1 and R_2 is of the form R_2-Z_2, wherein Z_1 and Z_2 are bridging radicals; and

Q_1 is a monomer, homopolymer, or block or graft interpolymer that contains:

i) a positively charged atom that is capable of forming an ionic bond with a negatively charged group present on a first cellulosic fiber; and

ii) a pendant functional group that is capable of forming a covalent bond with a free reactive group present on a second cellulosic fiber.

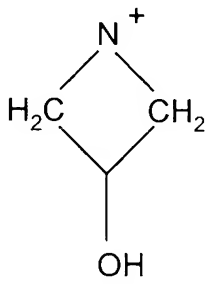
18. A paper product as defined in claim 17, wherein at least one of the R_1 and R_2 groups contain a C_8 or higher aliphatic hydrocarbon moiety.

19. A paper product as defined in claim 17, wherein Z_1 and Z_2 are selected from the group consisting of -CH_2-, -COO-, -CONR-, -O-, -S-, -

OSO_2O-, -CONHCO-, -CONHCHOHCHOO-, and combinations thereof.

20. A paper product as defined in claim 17, wherein the pendant functional group of the Q_1 moiety is provided by a group selected from epoxides, anhydrides, azetidiniums, or aldehydes.

21. A paper product as defined in claim 17, wherein the Q_1 moiety is an azetidinium ring having the following structure:



22. A paper product as defined in claim 17, wherein said paper web contains multiple layers.

23. A paper product as defined in claim 22, wherein said first cellulosic fiber is present within one of said layers and said second cellulosic fiber is present within another of said layers.

24. A paper product as defined in claim 17, further comprising at least one other paper web to form a multi-ply paper product.

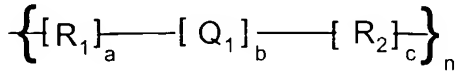
25. A paper product as defined in claim 24, wherein said first cellulosic fiber is present within one of paper webs and said second cellulosic fiber is present within another of said paper webs.

26. A method of forming a paper web comprising:

i) providing a furnish of cellulosic fibers;

ii) depositing the furnish onto a foraminous surface to form a paper web;

iii) applying a reactive composition to the furnish of cellulosic fibers, the paper web, or combinations thereof, said reactive composition having the following structure:



wherein,

a, b, c > 0;

$n \geq 1$;

R_1 and R_2 are monomers, homopolymers, or block or graft interpolymers that are capable of imparting a certain function to the paper web; and

Q_1 is a monomer, homopolymer, or block or graft interpolymer that contains:

a) a positively charged atom that is capable of forming an ionic bond with a negatively charged group present on a first cellulosic fiber of said paper web; and

b) a pendant functional group that is capable of forming a covalent bond with a free reactive group present on a second cellulosic fiber of said paper web; and

iv) thereafter, at least partially drying said paper web.

27. A method as defined in claim 26, wherein at least one of the R_1 and R_2 groups include a moiety selected from the group consisting of a polysiloxane, an aliphatic hydrocarbon, an amphiphilic hydrocarbon, and combinations thereof.

28. A method as defined in claim 26, wherein at least one of the R_1 and R_2 groups contain a C_8 or higher aliphatic hydrocarbon moiety.

29. A method as defined in claim 26, wherein R_1 is of the form R_1-Z_1, wherein Z_1 is a bridging radical.

30. A method as defined in claim 29, wherein Z_1 is selected from the group consisting of -CH_2-, -COO-, -CONR-, -O-, -S-, -OSO_2O-, -CONHCO-, -CONHCHOHCHOO-, and combinations thereof.

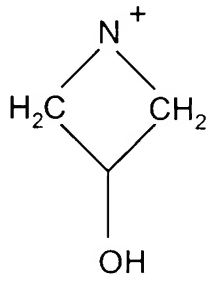
31. A method as defined in claim 26, wherein R_2 is of the form R_2-

Z_2, wherein Z_2 is a bridging radical.

32. A method as defined in claim 31, wherein Z_2 is selected from the group consisting of -CH_2-, -COO-, -CONR-, -O-, -S-, -OSO_2O-, -CONHCO-, -CONHCHOHCHOO-, and combinations thereof..

33. A method as defined in claim 26, wherein the pendant functional group of the Q_1 moiety is provided by a group selected from epoxides, anhydrides, azetidiniums, or aldehydes.

34. A method as defined in claim 26, wherein the Q_1 moiety is an azetidinium ring having the following structure:



35. A method as defined in claim 26, wherein said paper web contains multiple layers.

36. A method as defined in claim 35, wherein said first cellulosic fiber is present within one of said layers and said second cellulosic fiber is present within another of said layers.

37. A method as defined in claim 26, wherein said reactive composition is applied to said furnish of cellulosic fibers.

38. A method as defined in claim 26, wherein said reactive composition is applied to said paper web.